

# SCIENCE

# And Technology Program



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FY 1999 - FY 2001

Fish are being entrained into canals along with irrigation water. The extent of entrainment is rarely quantified, but is very necessary in the application of effective fish protection techniques, including positive barriers and behavioral technology.

Intake Canal is the largest canal on the Lower Yellowstone, Montana, and this is where an intensive quantitative netting program has been designed within the research program.

Project objectives were to: (1) quantify fish entrainment into Intake Canal, Montana; (2) develop entrainment sampling devices that represent true entrainment and do not injure fish collected; and (3) determine if there are structures or natural canals that can be used to reduce entrainment or enhance return of fish to the Yellowstone River.

Within FY 1999, net cod end designs to keep collected fish alive were used in entrainment sampling from May through September 12, 1999, with very good results. In fact, many native sturgeon chub netted were transported alive by the USFWS to reintroduction sites in the little Missouri River. Thousands of fish are being entrained in the Intake Canal, and several designs and techniques to reduce or eliminate this entrainment have been started. For FY 2000, an additional program study has been suggested for the T&Y Canal and the Huntley Canal, in Montana, and net design and holding cod ends will be evaluated and improved.

USBR Montana Area Office  
Montana Department of Fish, Wildlife and Parks  
USFWS, Bismarck, North Dakota  
Glendive Chamber of Commerce  
Idaho State University.

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